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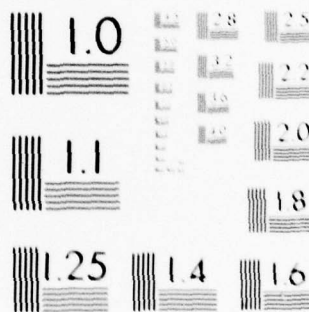
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20. ABSTRACT → This is the Soviet Laser Bibliography for May-June 1978 and is no. 35 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.		

### Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1978, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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## I. BASIC RESEARCH

### A. SOLID STATE LASERS

#### 1. Crystal: Rare-Earth Activated

##### a. Nd<sup>3+</sup>

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#### IV. SOURCE ABBREVIATIONS

(CIRC Codens)

BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimiques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN Arm	(DANAA)	Akademiya nauk Armyanskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovid'i. Seriya A. Fiziko-matematichni ta tekhnichni nauky
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
EOM	(EOBMA)	Elektronnaya obrabotka materialov
FAIO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FDIR	(FDRSB)	Fizyka dielektrykow i radiospektroskopia. Prace komisji matematyczno-przyrodniczej Poznanski towarzystwo przyjaciel nauk
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FGIV	(FGVZA)	Fizika gorennya i vzryva
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Az	(IAFMA)	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Kaz	(IAKFB)	Akademiya nauk Kazakhskoy SSR. Izvestiya. Seriya fiziko-matematicheskaya
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika

IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
Ois	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(RZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Sbornik. International Conference on Phenomena in Ionized Gases. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 2. Leipzig, 1977.
Sb2		International Conference on Phenomena in Ionized Gases. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 1. Leipzig, 1977.
Sb3		Elementy i tekhnicheskiye sredstva upravleniya i regulirovaniya. Novocherkassk, 1977.
Sb4		Vsesoyuznaya konferentsiya po inzhenernym problemam termoyadernykh reaktorov, Leningrad, 28-30 June 1977. Doklady, v. 2, Leningrad, 1977.
Sb5		Opticheskaya golografiya i yeye primeneniye. Leningrad, Nauka, 1977.
Sb6		Prostranstvennyye modulyatory sveta. Leningrad, Nauka, 1977.

- Sb7 Radiotekhnika, no. 45, 1978.
- Sb8 Voprosy atomnoy nauki i tekhniki. Seriya proyektirovaniye, no. 2, 1977.
- Sb9 Mezhdunarodnyy simpozium po perekhodnomu izlucheniyu, chastitsam vysokikh energiy, Yerevan, 1977. Trudy. Yerevan, 1977.
- Sb10 Opticheskiye i elektroopticheskiye metody i pribory analiza sostava veshchestva. Kiyev, 1977.
- Sb11 Vychislitel'naya tekhnika. Vil'nyus, 1977.
- Sb12 Vsesoyuznaya shkola po golografii. 9th. Tbilisi, 24-29 January 1977. Materialy. Leningrad, 1977.
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- Sb15 Eksperimental'nyye metody i apparatura dlya issledovaniy turbulentnosti. Novosibirsk, 1977.
- Sb16 Vsesoyuznaya shkola-konferentsiya molodykh uchenykh po fizike plazmy "Sovremennyye metody nagreva i diagnostiki plazmy," Khar'kov, 1977. Tezisy dokladov. Khar'kov, 1977.
- TKiT (TKTEA) Tekhnika kino i televideniya
- Tr1 Moskovskiy fiziko-tekhnicheskiy institut. Trudy, no. 12, 1977.
- Tr2 Belorusskiy universitet. Vestnik, seriya 1, no. 1, 1978.
- Tr3 Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly. Izvestiya. Yestestvennyye nauki, no. 3, 1977.
- Tr4 Tsentral'nyy aerogidrodinamicheskiy institut. Uchenyye zapiski, v. 8, no. 5, 1977.
- Tr5 Moskovskiy fiziko-tekhnicheskiy institut. Trudy. Seriya Obshchaya i molekulyarnaya fizika, no. 9, 1977.
- Tr6 Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 216, 1977.
- Tr7 Trudy uchebnykh institutov svyazi, no. 86, 1977.
- Tr8 Tartusskiy universitet. Uchenyye zapiski, no. 443, 1977.
- Tr9 Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 221, 1977.
- Tr10 Moskovskiy energeticheskiy institut. Trudy, no. 334, 1977.

Tr11		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 34/64, 1977.
Tr12		VNII vodosnabzheniya, kanalizatsii, gidrotekhnicheskogo sooruzheniya i inzhenernoy gidrogeologii. Trudy, no. 14, 1977.
Tr13		Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 258, 1977.
Tr14		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 215, 1977.
Tr15		Nauchnyye trudy vysshikh uchebnykh zavedeniy LitSSR. Ul'trazvuk, no. 9, 1977.
Tr16		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 35/65, 1977.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskii zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFik	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki



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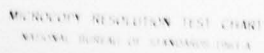
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